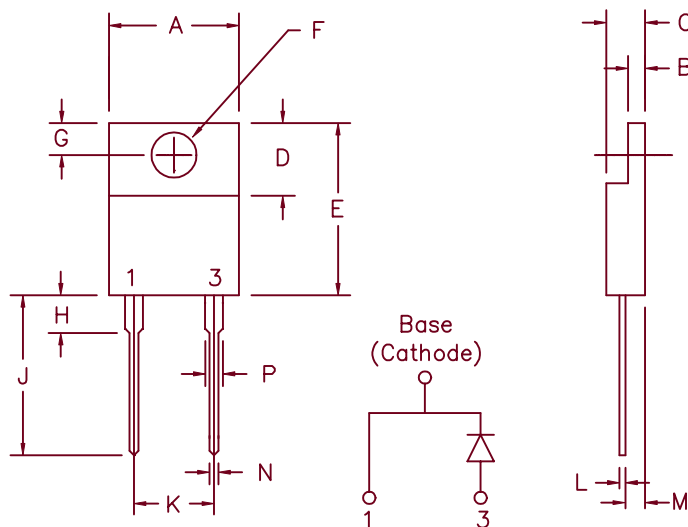


10 Amp Schottky Barrier Rectifiers MS1003 — MS1004



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to TO-220AC

Microsemi Catalog
Number

MS1003
MS1004

Repetitive Peak
Reverse Voltage

30V
40V

Transient Peak
Reverse Voltage

30V
40V

- Schottky barrier rectifier
- Guard ring protection
- Low power loss, high efficiency
- V_{RRM} 30 to 40 Volts
- Reverse energy tested

Electrical Characteristics

Average Forward Current
Maximum Surge Current
Max. Peak Forward Voltage
Max. Peak Forward Voltage
Max. Peak Reverse Current
Max. Peak Reverse Current
Typical Junction Capacitance

$I_F(AV)$ 10 Amps
 I_{FSM} 225 Amps
 V_{FM} .48 Volts
 V_{FM} .65 Volts
 I_{RM} 10 mA
 I_{RM} 250 μA
 C_J 660 pF

$T_C = 158^\circ C$, Square wave, $R_{\theta JC} = 2.5^\circ C/W$
8.3ms, half sine, $T_J = 175^\circ C$
 $I_{FM} = 10A$, $T_J = 175^\circ C$ *
 $I_{FM} = 10A$, $T_J = 25^\circ C$ *
 V_{RRM} , $T_J = 125^\circ C$ *
 V_{RRM} , $T_J = 25^\circ C$
 $VR = 5.0V$, $T_J = 25^\circ C$

*Pulse test: Pulse width 300 μsec . Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance
Mounting torque
Weight

T_{STG}
 T_J
 $R_{\theta JC}$

$-55^\circ C$ to $+175^\circ C$
 $-55^\circ C$ to $+175^\circ C$
 $2.5^\circ C/W$ Junction to case
8-12 inch pounds 6-32 screw
.08 ounces (2.3 grams) typical

MS1003 — MS1004

Figure 1
Typical Forward Characteristics

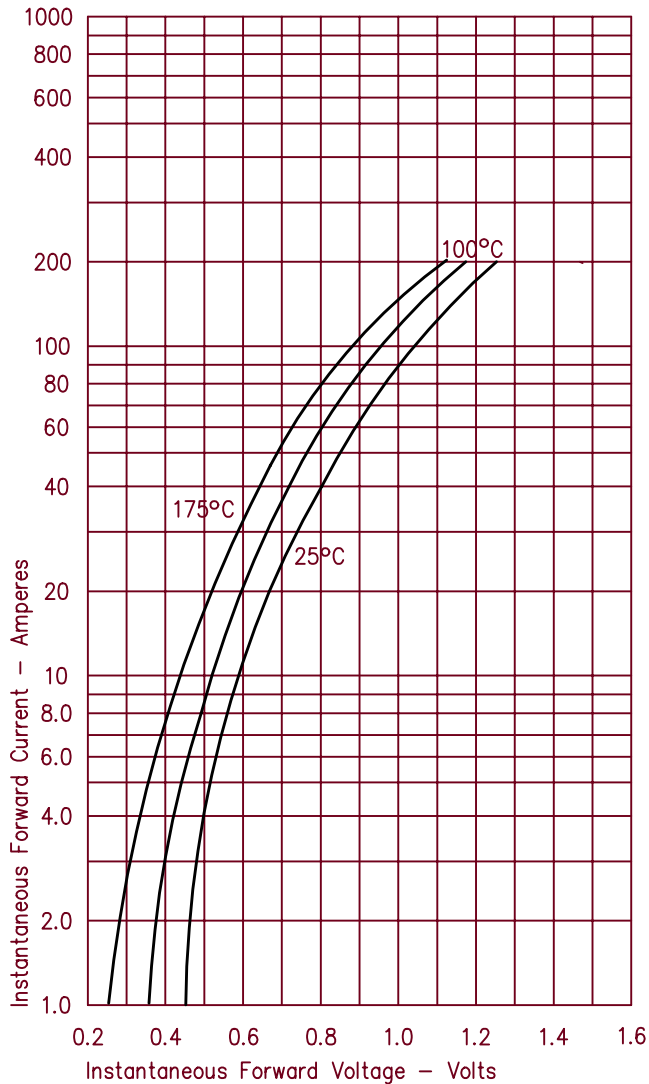


Figure 3
Typical Junction Capacitance

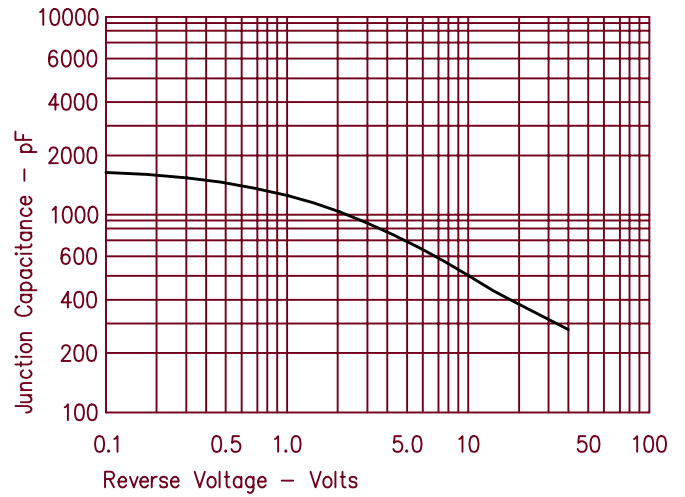


Figure 4
Forward Current Derating

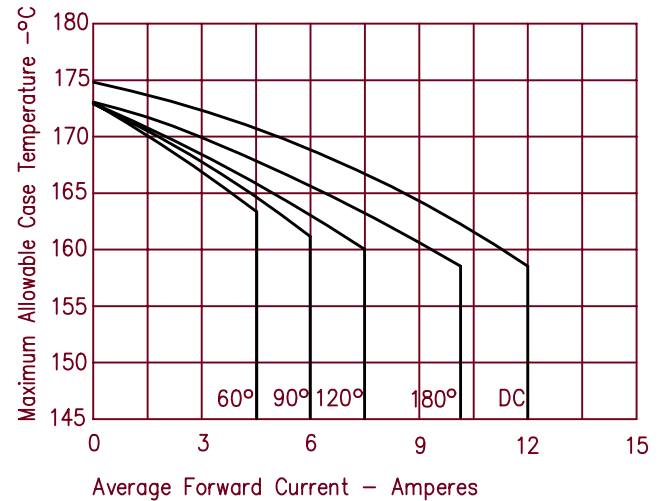


Figure 2
Typical Reverse Characteristics

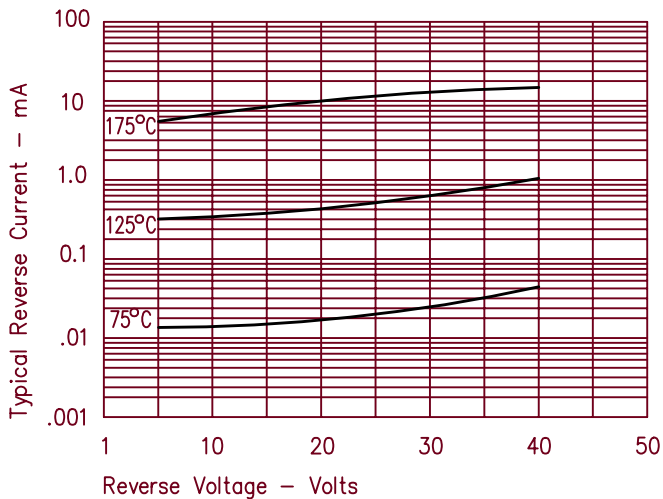


Figure 5
Maximum Forward Power Dissipation

